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# BARBERRY BUSHES

## SPREAD STEM RUST

TO WHEAT  
OATS  
BARLEY  
RYE



*Get rid of them*

Agricultural Research Service  
U. S. DEPARTMENT OF AGRICULTURE

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The stem-rust disease, caused by a fungus, attacks wheat, oats, barley, and rye. It takes food and moisture from the plants. The damaged grain has a low test weight and is of poor quality. Its market value is greatly reduced.

Stem rust is spread by tiny, seedlike spores. They float in the air and are carried long distances by the wind. The spores infect the grain. The rust develops rapidly in hot, muggy weather.

You can reduce stem-rust losses:

1. Eradicate all rust-spreading barberry bushes.
2. Grow rust-resistant varieties of grain approved for your locality.
3. Plant spring grains early in well-prepared soil. An early crop often escapes serious rust injury.

# STEM RUST MAKES THE DIFFERENCE

## *Profit*



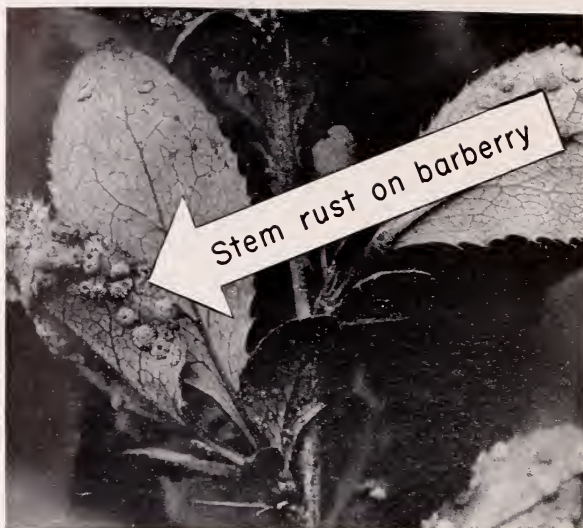
**Heavy, plump kernels from a healthy, rust-free crop.**

## *Loss*



**Lightweight, shriveled kernels from a badly rusted crop.**

The farmer's loss is especially severe because it includes crop production costs.



Stem rust develops each spring on the barberry, and spreads to wheat, oats, barley, and rye.

Races of stem rust are produced on the barberry. These races vary in their ability to attack the different varieties of grain. A new and virulent race occasionally becomes established, which can attack grain varieties previously considered resistant.

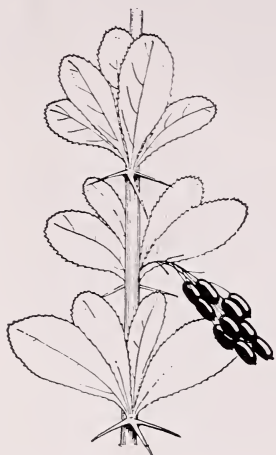
The development and spread of a single new race of stem rust has—

1. Caused crop losses amounting to millions of bushels of grain.
2. Caused farmers to discontinue growing excellent varieties of grain.
3. Caused the reduction of farm income by millions of dollars.

Destroy barberry bushes with chemicals. Place common salt around the crown of the bushes or apply ammonium sulfamate to stubs after cutting off canes. Destroy native barberry bushes by spraying the top growth and crown with a mixture of 2,4-D and 2,4,5-T.



*The barberry is easy to identify.*



Leaves with sharp-toothed edges

Spines usually three at a place

Red berries in bunches

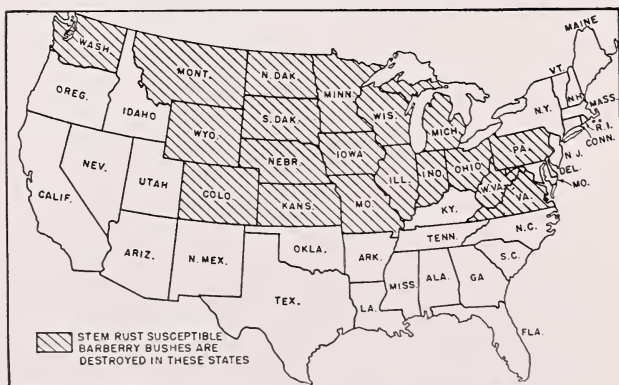
Outer bark gray

Inner bark and roots bright yellow

The common barberry bush is normally about 6 feet tall, although plants may range from seedlings to 20-foot bushes. The Alleghany and the Colorado barberries are low shrubs—2 to 3 feet—that grow in clumps or patches.

Report plants you think are rust-spreading barberry to your county agricultural agent.

## Barberry Eradication States



## ***Barberry eradication is a big job.***

A program of barberry eradication is carried on cooperatively by State, Federal, and local agencies in 19 States. (See map on preceding page.) The aim is to destroy all rust-spreading barberry bushes on more than 1 million square miles of land, which is the current control area. The States in this area produce more than 2 billion bushels of small grain annually. Some eradication work is also being done in Idaho, New York, and Oregon, by State and local agencies.

### ***What has been accomplished?***

1. More than 980,000 square miles have been cleared of barberry bushes.
2. More than 470 million rust-spreading barberry bushes have been destroyed.
3. More than 147,000 rural and urban properties have been cleared of barberry bushes.

### ***Where does this work stand now?***

1. Barberry bushes still occur on 51,000 square miles. Infested sites must be worked one or more times.
2. About half of these sites will be freed of barberry bushes after one more working.
3. There are 60,000 properties where barberry bushes have been found which must be reworked until free of these bushes.

A USDA motion picture, "Stem Rust," is available. For information on it, see your county agent.

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Prepared by Plant Pest Control Branch,  
Agricultural Research Service, Washington, D. C.

Supersedes Leaflet 315 of the same title.